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NPIC/R-293/64
May 1964

PHOTOGRAPHIC INTERPRETATION REPORT

EARTH SATELLITE TRACKING AND COMMUNICATION CENTER, SIMFEROPOL, USSR, MARCH 1964

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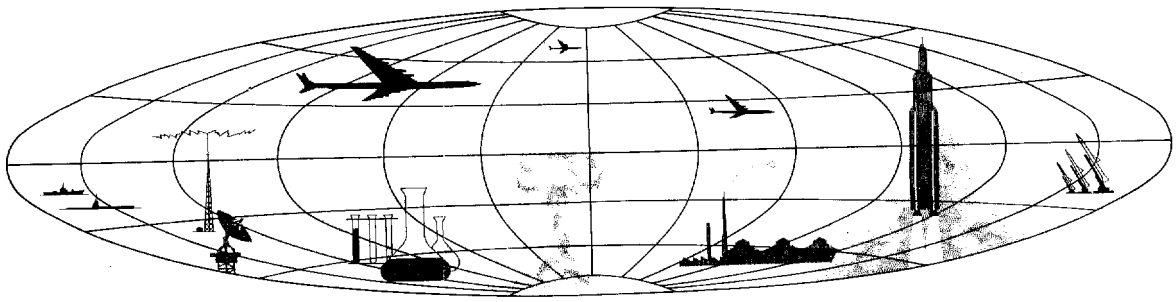
NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



PHOTOGRAPHIC INTERPRETATION REPORT

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PREFACE

This report, prepared in response to an NSA requirement, amplifies and updates information on the Simferopol Center as given in NPIC/R-69/64, February 1964. 1/ The principal photography utilized in this report is from Mission 4006 (March 1964) which has an improved scale that allows refinement of certain details derived from earlier, small-scale photography. Various analytical limitations continue to be felt, however, especially in that the elements of the telemetry arrays at the Center are not massive enough in structure to be defined, and in that the Mission 4006 photography does not lend itself to existing mensuration techniques.

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INTRODUCTION

The Simferopol Earth Satellite Tracking and Communication Center is located at 45-03N 33-53E, 11 nautical miles (nm) northwest of the town of Simferopol in the Crimea (Figure 1).

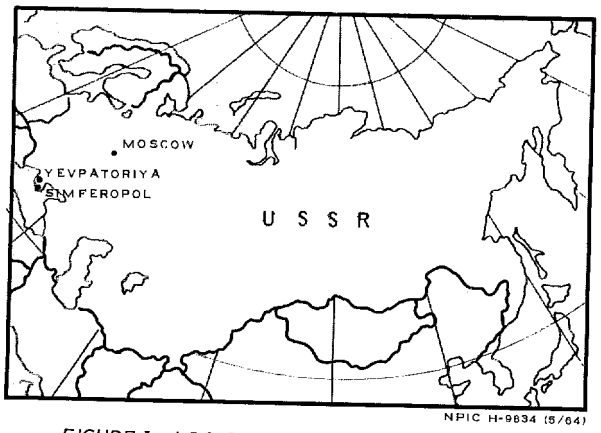

FIGURE 1. LOCATION OF SIMFEROPOL CENTER.

Although the Center has not changed appreciably since [redacted] and the main fence enclosing the Center remains basically the same, there is now evidence of secondary fencing which more clearly delineates the division of function within the Center (Figures 2 and 3). For this reason, certain areas carried in R-69/64 as separate items are now combined and described in this report as one, the Main Operations Area, with the following secondary breakdown within the area:

Radio Telescope Site
Unidentified Arrays and Microwave Section
FLIM FLAM Station
Control Facilities
Vehicle Maintenance and Repair Shop Section.

There are also considered to be three operational sub-areas: the High-Frequency (HF) Communications Antenna Farm, adjacent to the northern side of the Main Operations Area; and, physically separated from the main area, the Interferometer Site to the west, and the Probable Satellite Telemetry Collection Site to the east. A support area, somewhat less extensive than previously drawn, completes the apparent functional division of the Center.

MAIN OPERATIONS AREA

Radio Telescope Site

This section can now be seen to be separately secured within the main fencing, but there has been no apparent change since its earlier description in R-69/64 (as Item A, Radio Astronomy Station). Several miscellaneous buildings can now be more precisely delineated as a result of the larger scale photography, including small guard houses in three of the four corners of the enclosure and a gatehouse at the entrance. The steerable radio telescope or tracking dish remains in the stow position as previously reported. Its reflecting surface appears solid with a small, circular opening at the center. The feed is mounted on a quadrupedal structure. Two cable scars are visible extending out from the two previously reported calibration towers south of the site. One scar terminates near the radio telescope, the other enters the center just east of the Radio Telescope Site but is not visible beyond this point.

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Unidentified Arrays and Microwave Section

This section includes one control building, one microwave tower with two reflectors, 2 unidentified arrays/reflectors (possible DRUM HEAD), one filled cooling pond, and 2 small switching-type buildings. The major changes in the section since its earlier description occur with respect to the equipment present. For example, in addition to the single previously reported probable DRUM HEAD troposcatter antenna (which appears to be oriented at approximately [redacted] 25X1 photography), there now appears to be a second, similar antenna which is situated several hundred feet east of the control building and appears to be oriented at approximately 240 degrees. Both of these antennas are connected to the control building by cable scars. Although the identification of these antennas is not firm, they are both slightly elevated on earthen mounds and are apparently rotatable in azimuth and elevation.

Another change is that the previously reported location of the steerable yagi array now appears instead as a small switching-type building; the yagi array, visible on the ground photography, cannot be identified or located on [redacted] 25X1 photography.

Two prominent cable scars extend into the radio telescope site, one from the microwave tower and the second from the control building. The presence of these scars indicates a functional tie between the two areas.

FLIM FLAM Station

No new structures have been constructed at the FLIM FLAM Station, but certain changes can be noted with regard to the two previously reported two-story, 80- by 55-foot buildings. The western building now has an environmental protection dome covering the majority of its roof surface. At the center of the roof of the eastern building, there appears to be a square platform with a ringlike structure around it. There is also a small structure in the northeast corner of this roof, and another in the southeast corner. On the ground just east of the eastern building, there are two small, adjacent circular objects. The presence of a crane at the northeast corner of the eastern building indicates continuing construction activity on the roof of that building.

Control Facilities

All of the control-type and associated buildings not covered under other specific headings are included in this section, an extensive and irregularly shaped area which contains 6 control buildings, one large associated building, one small switching-type building, and one unfilled cooling pond. Although these were all present on [redacted] photography, it was 25X1 not possible to define their function at that time. In addition, there is a ground scar, probably a cable scar, which begins at the easternmost control building and extends westward into an area containing three of the control buildings and the large associated building. Just to the west of this group of buildings is a hardstand where two electronic vans and three smaller pieces of equipment are parked. Three additional vans, of the communications type, are parked just east of the northernmost control building. This building has a probable very high frequency (VHF) tracking/communications antenna mounted at the northwest corner of its roof.

Vehicle Maintenance and Repair Shop Section

This section contains one large vehicle repair and storage building with approximately 20 bays, and 2 large repair shops, all of which share a large common parking apron; 6 medium-sized shops/storage buildings, and several small, miscellaneous buildings.

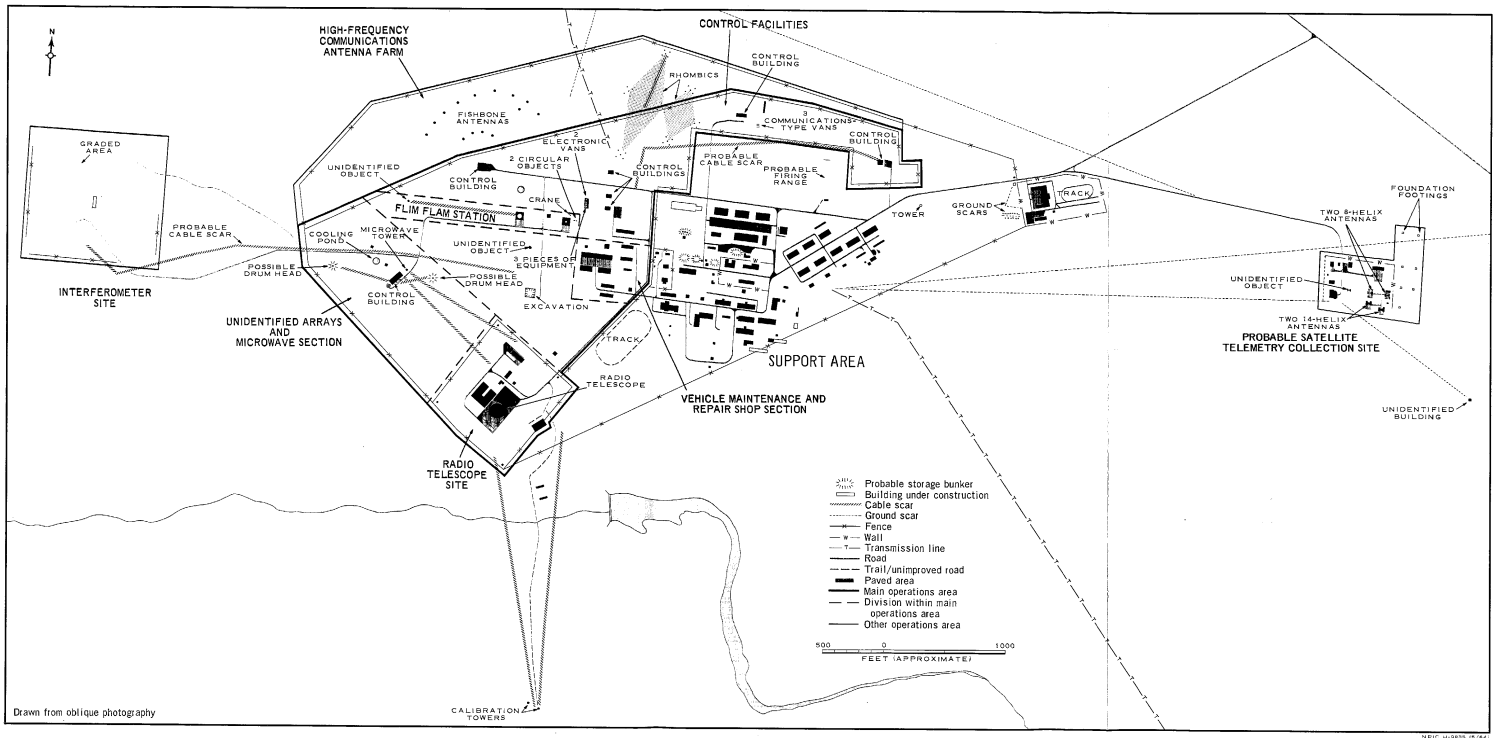

FIGURE 2. DETAILS OF THE SIMFEROPOL CENTER.

FIGURE 3. SIMFEROPOL CENTER [redacted] 25X1
25X1

OPERATIONAL SUB-AREAS

Interferometer Site

Construction activity continues on the interferometer. No electronic equipment was noted on either of the two graded, perpendicular base lines. A building, under construction just south of the point of intersection of the base lines, will be subsequently covered with earth in all probability. A probable cable scar begins at the interferometer site and extends east to a point approximately 500 feet south of the two FLIM FLAM buildings. Adjacent to this termination point is an excavation where, probably, a control building will be constructed.

Probable Satellite Telemetry Collection Site

This site, displaced to the east from the main operations area, is wall-secured on the north and east sides only. Just outside the eastern wall there is evidence of foundation footings for an additional structure or structures. A ground scar begins near the southwest corner of the site, extends southeast, and terminates at a building of unknown function. In regard to the four previously reported helix antenna arrays, the two 14-helix antennas appear to be mounted on H-shaped structures and the two 8-helix antennas appear to be mounted on pedestals. Roughly in the center of the site is an unidentified object which may be a piece of equipment. The previously reported 90-foot dish under construction has been removed, and is not visible anywhere within the Center. No other changes from the previous description have been noted.

HF Communications Antenna Farm

No visible change is noted since the earlier description of these facilities in R-69/64.

SUPPORT AREA

The support area contains 73 buildings, a sizable increase over previous estimates yet one which is a result of the greater accuracy possible on large-scale photography rather than of any new construction activity at the Center, for the area has not changed in overall size or appearance. There is only one significant new building under construction, a large, administration or headquarters type, situated in the northwest corner of the area. Centrally located within the area are five bunkers probably utilized for fuel storage. No other significant additions can be made to the previous description.

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REFERENCES

PHOTOGRAPHY

[redacted] 25X1

MAPS AND CHARTS

ACIC. US Air Target Chart, Series 200, Sheet 250-20HL, 4th ed, Sep 62, scale 1:200,000 (SECRET)

USNHO. US Air Target Mosaic, Series 50, Sheet 250-20/10MA, 1st ed, Jun 62, scale 1:50,000 (SECRET)

DOCUMENT

1. NPIC. R-69/64, *Earth Satellite Tracking and Communication Center, Simferopol, USSR,* Feb 64 (TOP SECRET [redacted] 25X1

REQUIREMENT

NSA. P0432/R 28-64

NPIC PROJECT

N-382/64